PATENT COOPERATION TREATY

10 Rec'd PCT/PTO 30 JUN

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

	Date of mailing *(day/month/year)* 21.04.2004
Applicant's or agent's file reference HL80983002ER	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/GB 02/05801	19.12.2002	04.01.2002

Applicant
FLYING NULL LIMITED ET AL.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:	Authorized Officer
European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Walsh, E Tel. +31 70 340-3813

Computer not noted

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference HL80983002ER	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB 02/05801	International filing date *(day/month/year)* 19.12.2002	Priority date *(day/month/year)* 04.01.2002
International Patent Classification (IPC) or both national classification and IPC G06K17/00, G06K17/00		
Applicant FLYING NULL LIMITED ET AL.		

1. This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 4 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
02.07.2003	21.04.2004
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Chiarizia, S Telephone No. +31 70 340-3771

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB 02/05801

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-18 as originally filed

Claims, Numbers

1-22 received on 19.01.2004 with letter of 16.01.2004

Drawings, Sheets

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-22
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-22
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-22
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The invention relates to a method for detecting articles wherein a location tag (secondary label) is encoded with data related to a plurality of tags (primary labels) attached to articles to be detected.
Such a method is disclosed in the document US-A-4688026 (D1).
D1 relates to the specific application of inventory control and teaches a method by which "identification tags" are mounted on objects or persons present in a particular room. In addition, location tags are mounted on a fixed structure associated with that room and are programmed to contain an association between the predefined space and the objects to be found within it. This document therefore discloses the general concept of providing an association between the data content of a primary and a secondary label in order to allow a verification step to be performed.

Claim 1 specifies the inventive application of associated primary and secondary tags in a method that enables counterfeit articles contained within a container, or the tampering of packaged articles contained within a container, to be detected

There is no disclosure in D1 of the possibility of employing associated primary and secondary tags for the purposes of detecting counterfeit articles and/or for detecting unauthorised tampering of articles contained within a container.

Therefore the subject-matter of claims 1 and 16 is new in the sense of Art. 33(2) PCT.

Document US-A-5565858 (D2) discloses a system designed to locate a container nested within a group of containers wherein a master tag is provided on a given container which is linked to a plurality of slave tags provided on the other containers. D2 does not discuss a means by which counterfeit articles may be detected, or unauthorised tampering of articles packaging could be identified.

Therefore there is no indication in the prior art to modify the method of D1 to arrive at the invention.

Thus the subject-matter of claims 1 and 16 is inventive in the sense of Art. 33(3) PCT

Subject-matter of dependent claims 2-15 and 17-22 is also new and inventive.

CLAIMS

1. A method of providing means for detecting counterfeit articles and/or for detecting unauthorised tampering of articles/article packaging, the method comprising the steps of:
i) determining one or more properties of an at least one primary label or of an article to which at least one primary label is, or is to be, attached; and
ii) encoding at least one secondary label with information about the one or more properties determined in step (i), such that there exists an association between the information contained in the or each secondary label and one or more of the properties of the or each primary label, or of an article to which the or each primary label is attached, wherein the or each primary label is provided on an article contained within a container holding a plurality of articles, and wherein the secondary label is provided on the outside of the container.

2. A method as claimed in claim 1, wherein the property determined in step (i) is the information encoded by one or more labels provided on the consumer product(s) packed at predetermined positions within the container.

3. A method as claimed in claim 1 or 2, wherein the or each primary label acts as a presence indicator.

4. A method as claimed in any preceding claim, wherein the property determined in step i) represents the positional properties of the or each primary label, or the article to which the or each primary label is, or is to be, attached.

5. A method as claimed in any preceding claim, wherein the property determined in step i) represents the information encoded by the or each primary label.

6. A method of detecting counterfeit articles and/or detecting unauthorised tampering of articles/article packaging, the method comprising the steps of:
i) determining one or more given properties of an at least one primary label, or the article to which at least one primary label is attached, the or each primary label being provided on an article contained within a container holding a plurality of articles;
ii) determining the information encoded by an at least one secondary label, the secondary label being provided on the outside of the container; and
iii) checking for the existence of a predetermined association between the information determined in steps i) and ii).

7. A method as claimed in claim 6, wherein the property determined in step (i) is the information encoded by one or more labels provided on the consumer product(s) packed at predetermined positions within the container.

8. A method as claimed in claim 6, wherein the property determined in step i) is the positional properties of the or each primary label, or the article to which the or each primary label is attached.

9. A method as claimed in claim 6, wherein the property determined in step i) is the information encoded by the or each primary label.

10. A method as claimed in any preceding claim, wherein the or each primary label comprises remotely detectable magnetic material.

11. A method as claimed in claim 10, wherein said magnetic material comprises low coercivity, high permeability

magnetic material.

12. A method as claimed in any preceding claim, wherein the information is obtained in step (i) by means of a reading device which employs an interrogation field comprising an ac field arranged so as to be parallel with the preferred axis of permeability of the magnetic material.

13. A method as claimed in any one of claims 1 to 11, wherein the information determined in step (i) is obtained by means of a reading device which employs an interrogation field comprising a high amplitude, low frequency scanning field and a low amplitude, high frequency field.

14. A method as claimed in any preceding claim, wherein the or each primary label is capable of being read by means of a reading device which operates in accordance with non-contact interrogation techniques.

15. A method as claimed in any preceding claim, wherein the or each primary label is capable of being read by means of a reading device operating in accordance with techniques which do not require a line of sight between the reading device and the or each primary label.

16. A system for detecting counterfeit articles and/or detecting unauthorised tampering of articles/article packaging, the system comprising at least one primary label provided on an article contained within a container holding a plurality of articles, and at least one secondary label provided on the outside of the container, wherein there exists an association between the information contained in the or each secondary label and one or more of the properties of the or each primary

label.

17. A system as claimed in claim 16, wherein the information contained in the or each secondary label is related to the information encoded by the label attached to at least one article packaged at a predetermined location within the container.

18. A system as claimed in claim 16, wherein the information contained in the or each secondary label represents the positional properties of the or each primary label, or the article to which the or each primary label is attached, within the container.

19. A system as claimed in claim 16, 17 or 18, wherein there exists an association in the data content of the or each primary label and the or each secondary label.

20. A system as claimed in any one of claims 16 to 19, wherein the or each primary label comprises remotely detectable magnetic material.

21. A system as claimed in claim 20, wherein said magnetic material comprises low coercivity, high permeability magnetic material.

22. A system as claimed in any one of claims 16 to 21, wherein the primary information carrier is provided with a simpler code than the secondary information label, and wherein the secondary information label is encoded with information about the information contained in the primary information label.